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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,995	10/22/2003	Masayuki Kamon	117589	8993

25944 7590 05/01/2007  
OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER
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PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
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3682

MAIL DATE	DELIVERY MODE
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05/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/689,995

**Applicant(s)**

KAMON ET AL.

**Examiner**

James Pilkington

**Art Unit**

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: _____                                     |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi, JP U 4-115592 (cited by applicant in IDS filed 1/06/04).

Takagi discloses an articulated manipulator comprising:

- A plurality of links (see all Figures) arranged in series
- Joints (23, between links 17, 18 and 19) pivotally connecting the adjacent links
- Coaxial joints (figure 5 at reference t, or see attached Figures) and diagonal joints (at character 21) wherein the diagonal joints each connecting the two adjacent links so that the adjacent links are able to turn about an inclined rotation axis inclined at an angle of 45 degrees to the axes of the two adjacent links (see attached Figures)
- One specific link (18) where the two rotation axes which the adjacent links are turned relative to the specific link are perpendicular to each other
- the first link (17) is connected to a base (6)
- the second link can have two parallel axis of rotation (19)

- the joints can be made of two sublinks (link 18 is made up of two links 18a and 18b) {clm 4}

Takagi does not disclose the specific arrangement of the links wherein the second and third link are connected by a diagonal joint with a rotation axis parallel to the the rotation axis of diagonal joint between links one and two, the third and fourth links are connected by a diagonal joint with a perpendicular axis of rotation, the fourth and fifth link are connected by a coaxial joint and the fifth and sixth link are connected by a diagonal joint.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the links in the specific order, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Re clms 2 and 7, the specific link is in the middle part of the series arrangement of the links.

Re clms 5 and 6, the last link is provide with a twist unit for connecting a predetermined terminal device (8) to the sixth link so as to be rotatable about a rotation axis aligned with the axis of the last link.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 2-7 have been considered but are moot in view of the new ground(s) of rejection. However, the examiner would like note that since the claim is not written as "consisting of" a prior art reference can have more

then six links and still read on the claim (response to argument made by applicant on pg 9 second paragraph).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In particular Dubrowskij, USP 6,796,203 cited in first action, disclose that the angles of the inclined surfaces can be made at 45 degrees (C3/L60-66), this then results in a rotation axis inclined at 45 degrees.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP

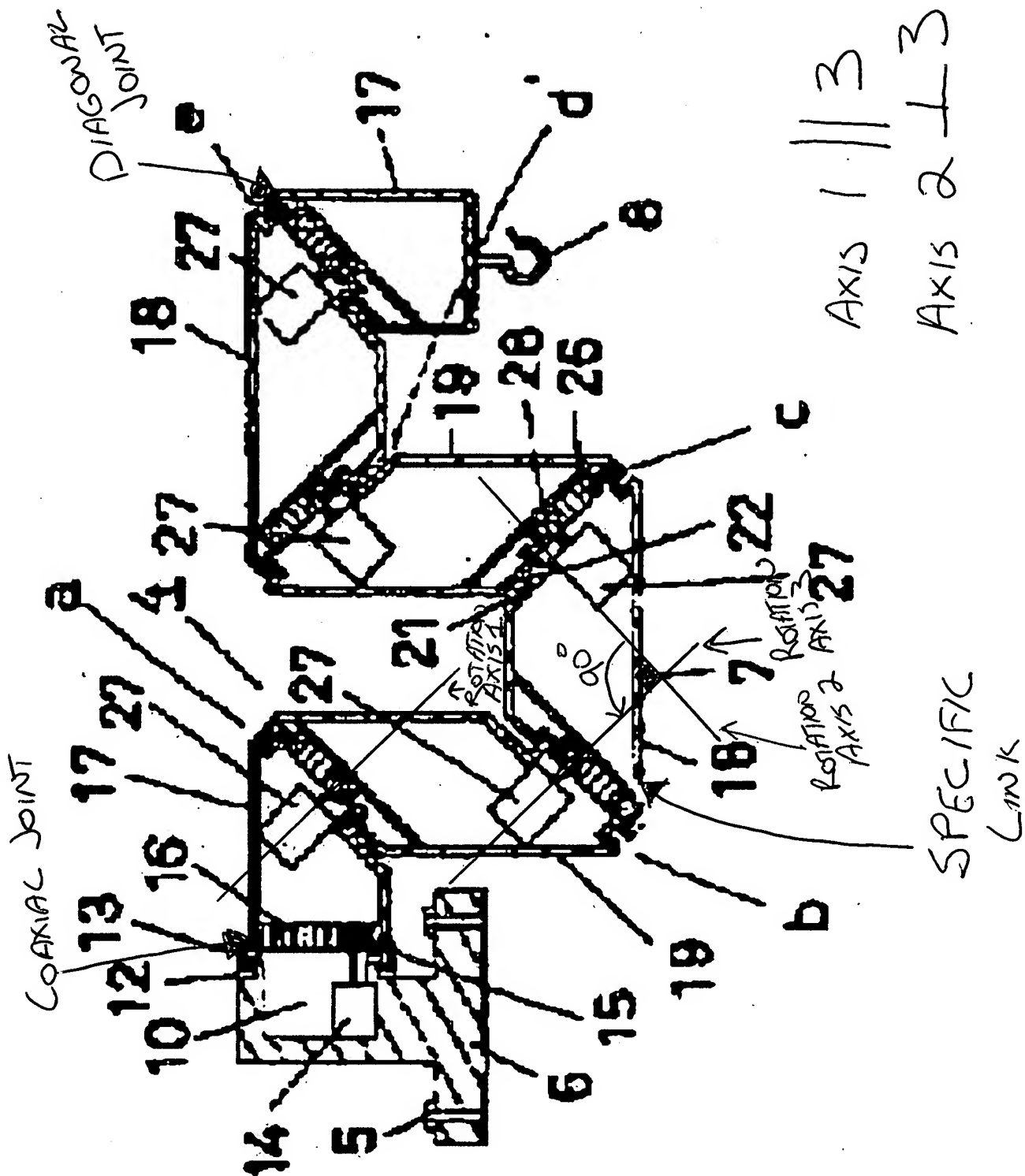
JP

4.23.07



RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER

# ATTACHMENT 1



Technical drawing of a mechanical assembly, likely a bracket or support structure, showing multiple views and components. The drawing includes the following labels and features:

- Views:**
  - Top View:** Shows the overall footprint of the assembly. Labels include 17 (top flange), 18 (central opening), 19 (side flange), 26 (central opening), 27 (side flange), and 28 (bottom flange).
  - Front View:** Shows the profile of the assembly. Labels include 6b (top flange), 6 (central opening), 8 (side flange), 14 (central opening), 17 (side flange), 19 (bottom flange), and 26 (central opening).
  - Side View:** Shows the profile of the assembly. Labels include 17 (top flange), 18 (central opening), 19 (side flange), 26 (central opening), 27 (side flange), and 28 (bottom flange).
- Components and Features:**
  - 17:** Top flange.
  - 18:** Central opening.
  - 19:** Side flange.
  - 26:** Central opening.
  - 27:** Side flange.
  - 28:** Bottom flange.
  - 6b:** Top flange.
  - 6:** Central opening.
  - 8:** Side flange.
  - 14:** Central opening.
- Annotations:**
  - COAXIAL JOINT:** Indicated on the top flange (17) and side flange (19).
  - DIAGONAL JOINT:** Indicated on the side flange (19).
  - 16a:** Dimension line indicating a distance.
  - 18a:** Dimension line indicating a distance.
  - 18b:** Dimension line indicating a distance.
  - 19a:** Dimension line indicating a distance.
  - 19b:** Dimension line indicating a distance.
  - 26a:** Dimension line indicating a distance.
  - 26b:** Dimension line indicating a distance.
  - 27a:** Dimension line indicating a distance.
  - 27b:** Dimension line indicating a distance.
  - 28a:** Dimension line indicating a distance.
  - 28b:** Dimension line indicating a distance.
  - 29:** Dimension line indicating a distance.
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  - 97:** Dimension line indicating a distance.
  - 98:** Dimension line indicating a distance.
  - 99:** Dimension line indicating a distance.
  - 100:** Dimension line indicating a distance.

SPECIFIC LINK